

REMARKS

Claims 1-8 are pending in the present application. Claims 1 and 3 are amended in response to the Action. Claim 7 has been cancelled.

Claims 1 and 3 are objected due to the term "being". Claim 7 stands rejected under 35 U.S.C. § 112, second paragraph. Claims 1-3 and 5-6 stand rejected under 35 U.S.C. § 102(b) as being anticipated or in the alternative, under 35 U.S.C. § 103 as obvious over U.S. Patent No. 3,988,263 to Hansford ("Hansford"). Claims 3-4 and 6 stand rejected under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 6,361,757B1 to Shikada et al. ("Shikada et al."). Claim 8 stands rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,627,572B1 to Cai et al. ("Cai et al."). The Applicants submit that the rejections are now obviated in view of the above amendment and the arguments, which follow, and respectfully request the rejections be withdrawn.

Support of Amendments

The amendments presented above have been made to recite particular embodiments of the inventions so as to expedite the prosecution of the present application to allowance in accordance with the USPTO Patent Business Goals (65 Fed. Reg. 54603, September 8, 2000). These amendments do not represent an acquiescence or agreement with any of the outstanding rejections.

Claims 1 and 3 are amended herein to more particularly point out what Applicants regard as the invention. Support for this amendment can be found in cancelled Claim 7 and the specification (*See* Page 10, line 26 - page 11 line 2). Claim 7 is cancelled herein without prejudice.

Claim Objections

Claims 1 and 3 are objected due to the term "being". Applicants have amended Claims 1 and 3 as suggested by the Examiner and respectfully request reconsideration and withdrawal of the objections to these claims.

Claim rejections- 35 U.S.C. §112 second paragraph

Claim 7 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out what Applicants regard as the invention. Claim 7 is canceled herein without prejudice, thereby mooted this rejection as it applies to this claim.

Claims rejections -35 U.S.C. § 102(b) and 35 U.S.C. § 103 in view of Hansford

Claims 1-3 and 5-6 stand rejected under 35 U.S.C. § 102(b) as being anticipated or in the alternative, under 35 U.S.C. § 103, as obvious over Hansford.

Claims 1 and 3 are amended to recite embodiments of "the catalyst having a porous structure, wherein an amount of pores having pore diameters of 80 Å to 200 Å occupy a largest volume in said porous structure and wherein the volume of pores having pore diameters of 80 Å to 200 Å is 35 percent or more based on total pore volume." As amended herein, the embodiment of the catalyst's porous structure have the recited "pore volume" is neither disclosed nor suggested in Hansford. Claims 2 and 6 are dependent claims from Claim 1, and Claim 5 is dependent claim from Claim 1 or Claim 3. Both Claim 1 and Claim 3 are amended herein to recite an embodiment that is neither taught nor suggested in Hansford. Thus, Claims 1-3 and 5-6 are not anticipated by, or obvious over Hansford. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of Claims 1-3 and 5-6 based on Hansford.

Claim rejections-35 U.S.C. § 102(a) in view of Shikada et al.

Claims 3-4 and 6 stand rejected under 35 U.S.C. §102(a) as being anticipated by Shikada et al.

Similar to the arguments presented above, Claim 3 has been amended to recite embodiments of "the catalyst having a porous structure, wherein an amount of pores having pore diameters of 80 Å to 200 Å occupy a largest volume in said porous structure and wherein the volume of pores having pore diameters of 80 Å to 200 Å is 35 percent or more based on total pore volume." Claim 4 is a dependent claim of

Claim 1 or Claim 3, and Claim 6 is a dependent claim of Claim 3. Both Claim 1 and Claim 3 are amended herein to recite an embodiment that is neither taught nor suggested in Shikada et al. Thus, Claims 3-4 and 6 are not anticipated by Shikada et al. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of Claims 3-4 and 6 based on Shikada et al..

Claim Rejections-35 U.S.C. § 103 in view of Cai et al.

Claim 8 are rejected under 35 U.S.C § 103(a) as being unpatentable over Cai et al. Applicants respectfully disagree with this assertion.

Three basic criteria must be met in order to establish a prima facie case of obviousness. 1). The prior art must teach or suggest all the claim recitations. *See In re Wilson*, 57 C.C.P.A. 1029, 1032 (C.C.P.A., 1970). 2) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine references teachings in order to achieve the claimed invention. *See In re Oetiker*, 24 U.S.P.Q.2d 1443, 1446 (Fed. Cir. 1992); *In re Fine*, 837 F.2d at 1074; *In re Skinner*, 2 U.S.P.Q.2d 1788; 1790 (Bd. Pat. App. & Int. 1986). 3) There must be a reasonable expectation of success. *See M.P.E.P.* § 2143. Further, it is the burden of the Examiner to establish a prima face case of obviousness when rejecting claims under 35 USC § 103. *see In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir., 1984).

For the reasons discussed below, Applicants respectfully submit that the difference between the present application and Cai et al. is not obvious to a person having ordinary skill in the art at the time of the invention. First, Cai et al. discloses a process of preparing a catalyst precursor by precipitating the copper and zinc component separately from the aluminum component. (*See Cai et al.*, Col. 5, lines 11-13). In the reference, the process of precipitation includes steps of 1) blending copper soluble salts and zinc soluble salts in an aqueous solution, 2) adding a precipitating agent such as carbonate, bicarbonate or a combination thereof, and 3) adjusting the pH to about 6 to about 9 and a temperature to about 80°C. (*See Cai et al.*, Col. 5, lines 14-26) In contrast to the precipitation process taught by Cai et al., the present application teaches the preparation of a catalyst including the step of forming a sol,

which is described in Claim 8, support for which is provided in the specification and its disclosure relating to "an acid being added to aluminum alkoxide to control the pH to preferably 1 to 3, thereby causing a hydrolysis reaction of the aluminum alkoxide to prepare a uniform sol. (See Application, page 5, lines 20-22). The step of forming a sol taught by the present invention is completely different from the precipitation process disclosed by Cai et al, which is evidenced by the completely different pH range of the reaction and the use of precipitation agent by the reference. Therefore, Cai et al. does not teach or suggest the step of producing a sol recited in Claim 8. Secondly, Cai et al. does not teach or suggest "aluminum alkoxide", which is a component in the process of forming a sol. Instead, Cai et al. discloses a process of preparing an aluminum component by neutralizing a sodium aluminum or potassium aluminum solution with an acidic material until a pH of about 6 to about 9 is achieved or alternatively by blending an acidic aluminum salt with a basic material. There is no evidence in the reference to teach or suggest that aluminum alkoxide is present in the process described by Cai et al. Thus, Cai et al. does not teach or suggest all claim recitations of the present application, and there is no evidence that one of ordinary skill in the art will be motivated to modify the process disclosed by Cai et al. to achieve the method of the present invention.

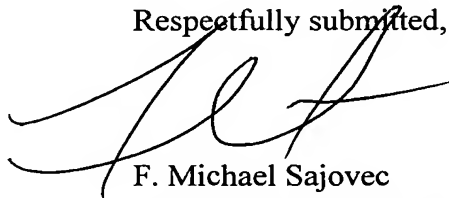
Therefore, for the reasons stated above, Applicants submit that Claim 8 is not obvious over Cai et al., and respectfully request that these rejections be withdraw.

In re: Takeishi et al.
Serial No.: 10/730,638
Filed: December 8, 2003
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CONCLUSION

In view of the forgoing remarks, Applicants respectfully request that all outstanding rejections to the claims be withdrawn and that a Notice of Allowance be issued in due course. The Examiner is invited and encouraged to contact the undersigned directly if such contact will expedite the prosecution of the pending claims at issue. In any event, any questions that the Examiner may have should be directed to the undersigned, who may be reached at (919) 854-1400.

Respectfully submitted,

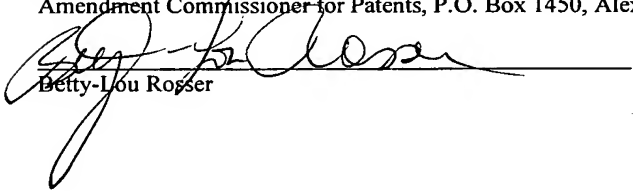


F. Michael Sajovec
Registration No. 31,793

Myers Bigel Sibley & Sajovec, P.A.
P. O. Box 37428
Raleigh, North Carolina 27627
Telephone: (919) 854-1400
Facsimile: (919) 854-1401
Customer No. 20792

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Betty-Lou Rogger